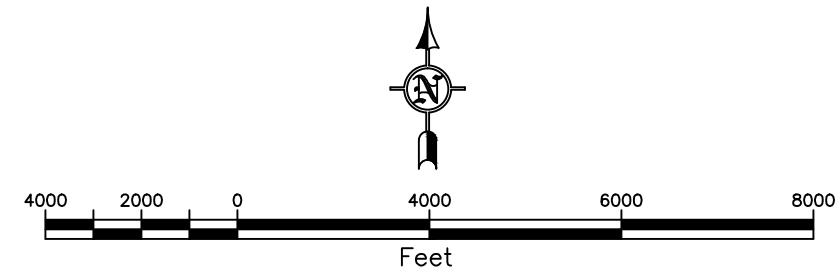


LEGEND

- Proposed pipeline centerline
 - MTV-1 MT DEQ pipeline alternative route
 - CAR-013 Access Road
 - PS-09 Pump Station
 - MLV-01 Valve Site
 - 45 Milepost
 - Approximate lek location
 - 3-mile buffer
 - 1-mile buffer
 - Viewshed from lek
 - Suitable nesting habitat*
North of Milk River: Average shrub cover ≥15%, silver sagebrush is approximately half of the shrub cover (Tack 2006).
South of Milk River: Average shrub cover ≥15-31% of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
*All nesting habitat based on field mapping within 150' of centerline.
NOTE: Implement Mitigation I at all areas with suitable nesting habitat.
- Proposed Construction Constraints and Mitigation
- Constraint I. No construction from March 1 through June 15.
 - Constraint II. No construction from ½ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
 - Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
 - Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

Notes:
1. Thirty-seven male sage-grouse observed in 2009.

Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.



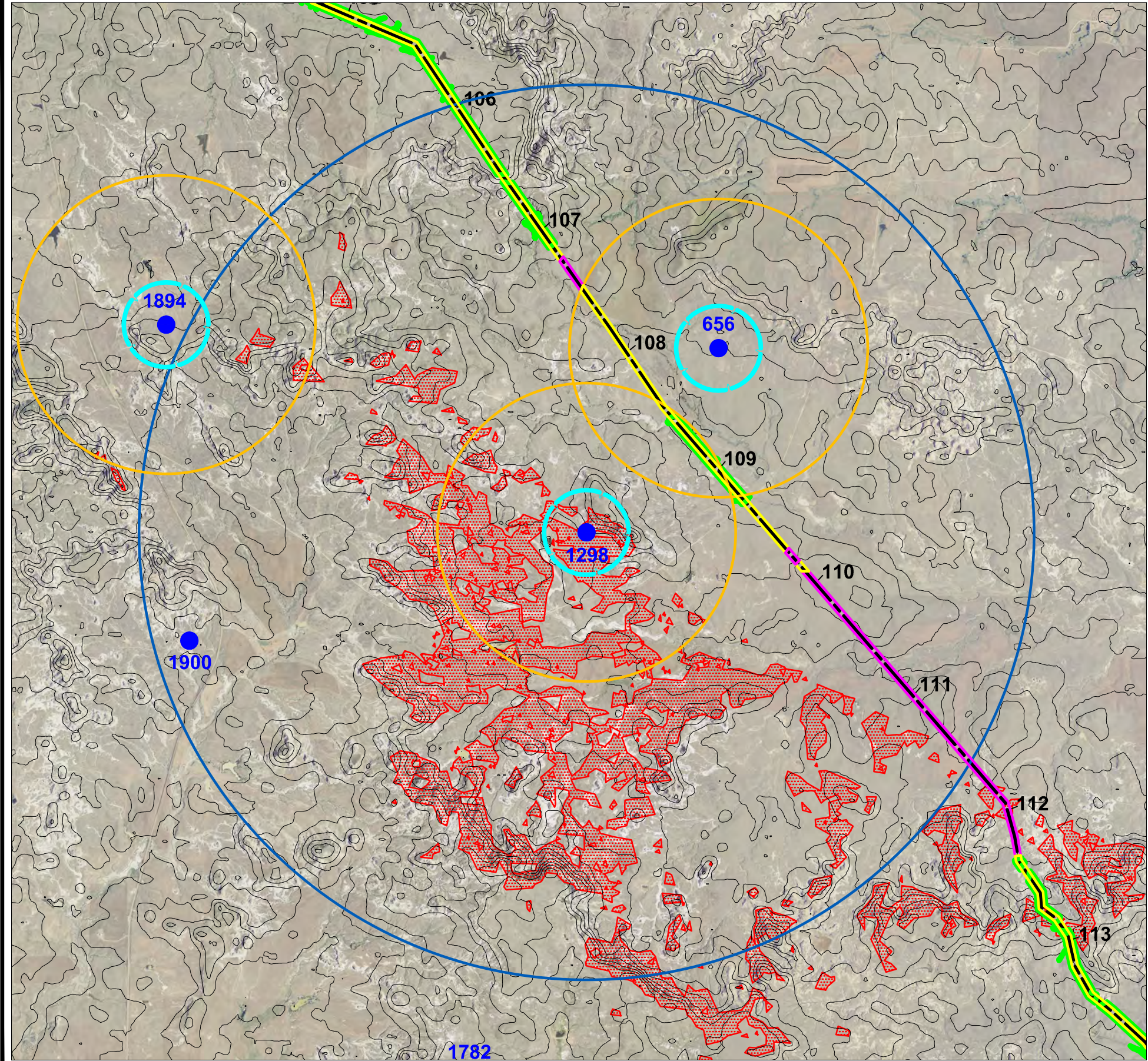
Greater sage-grouse lek 656 : Viewshed from lek and suitable nesting habitat along Keystone XL project



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P.O. Box 6045
Helena, Montana 59604

SCALE: 1"=4000'
DATE: 07/02/10
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CHECKED BY: JB
FILE: KXL1006.DWG

FIGURE
8
SHEET: 1 of 1

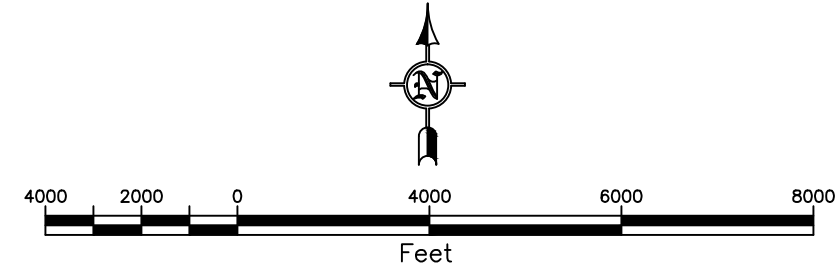


LEGEND

- Proposed pipeline centerline
 - MTV-1 MT DEQ pipeline alternative route
 - CAR-013 Access Road
 - PS-09 Pump Station
 - MLV-01 Valve Site
 - 45 Milepost
 - Approximate lek location
 - 3-mile buffer
 - 1-mile buffer
 - Viewshed from lek
 - Suitable nesting habitat*
North of Milk River: Average shrub cover ≥15%, silver sagebrush is approximately half of the shrub cover (Tack 2006).
South of Milk River: Average shrub cover ≥15-31% of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
*All nesting habitat based on field mapping within 150' of centerline.
NOTE: Implement Mitigation I at all areas with suitable nesting habitat.
- Proposed Construction Constraints and Mitigation
- Constraint I. No construction from March 1 through June 15.
 - Constraint II. No construction from ½ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
 - Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
 - Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

Notes:
1. Four male sage-grouse observed in 2003.

Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.



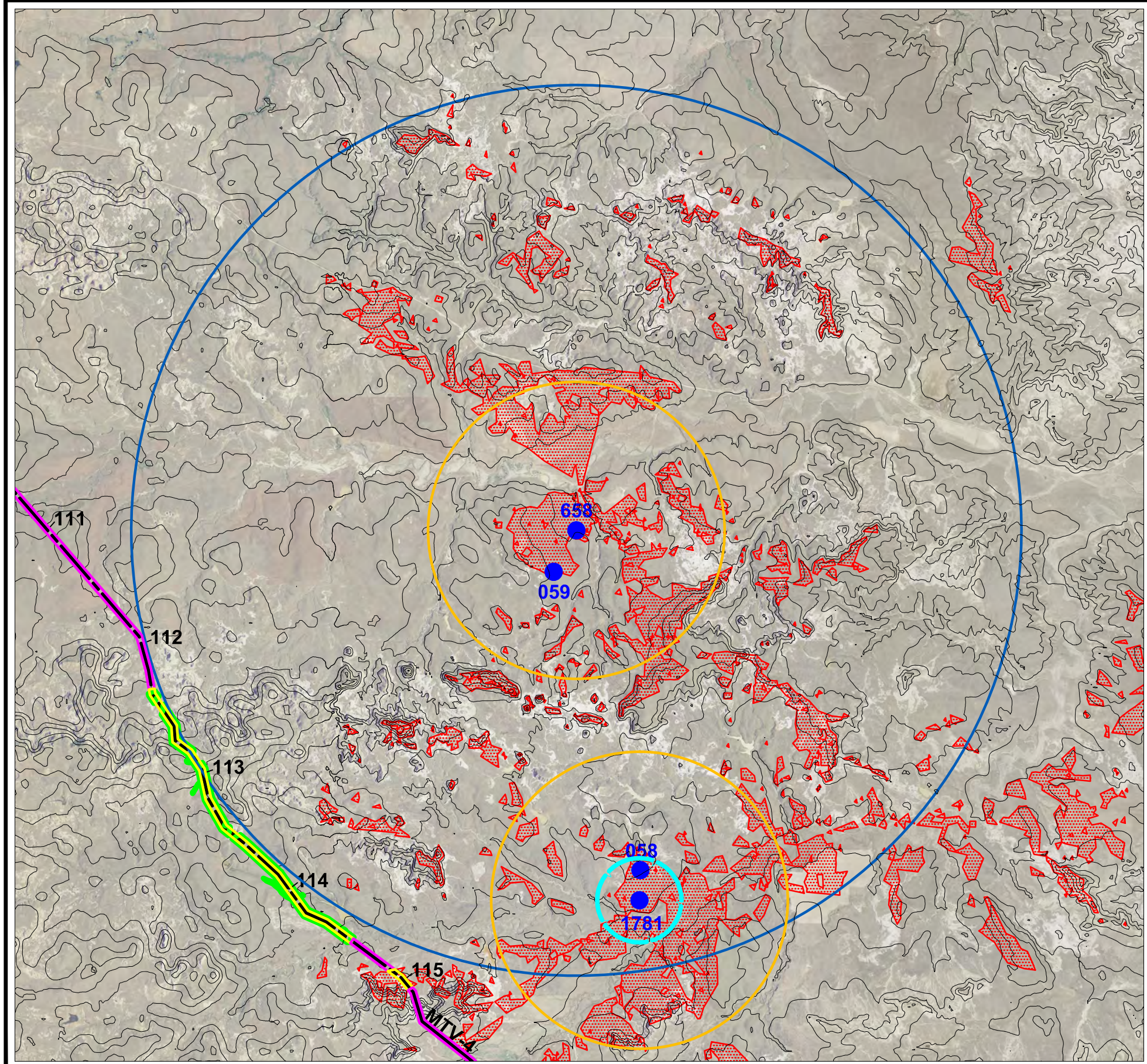
Greater sage-grouse lek 1298 : Viewshed from lek and suitable nesting habitat along Keystone XL project



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FILE: KXL1006.DWG

FIGURE
9
SHEET: 1 of 1

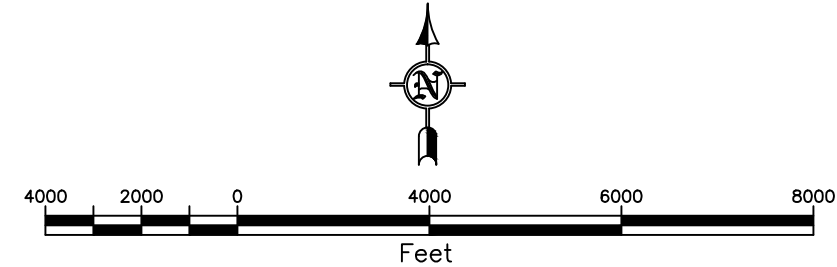


LEGEND

- Proposed pipeline centerline
 - MTV-1 MT DEQ pipeline alternative route
 - CAR-013 Access Road
 - PS-09 Pump Station
 - MLV-01 Valve Site
 - 45 Milepost
 - Approximate lek location
 - 3-mile buffer
 - 1-mile buffer
 - Viewshed from lek
 - Suitable nesting habitat*
North of Milk River: Average shrub cover $\geq 15\%$, silver sagebrush is approximately half of the shrub cover (Tack 2006).
South of Milk River: Average shrub cover $\geq 15\text{--}31\%$ of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
*All nesting habitat based on field mapping within 150' of centerline.
NOTE: Implement Mitigation I at all areas with suitable nesting habitat.
- Proposed Construction Constraints and Mitigation**
- Constraint I. No construction from March 1 through June 15.
 - Constraint II. No construction from $\frac{1}{2}$ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
 - Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
 - Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

- Notes:
- One male sage-grouse observed in 2009.
 - Keystone recorded 5 males at point 059 in April 2010.

Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.



Greater sage-grouse lek 658 : Viewshed from lek and suitable nesting habitat along Keystone XL project



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FILE: KXL1006.DWG

FIGURE
10
SHEET: 1 of 1

